

WILDLIFE MANAGEMENT UNIT 7 - KAMAS

Boundary Description

Summit and Wasatch Counties - Boundary begins at the junction of I-80 and SR-32 (Wanship); south on SR-32 to the Weber Canyon Road at Oakley; east on this road to Holiday Park and the Weber River Trail; east on the Weber River Trail to SR-150 near Pass Lake; south on SR-150 to the North Fork of the Provo river; south along the North Fork of the Provo River to the Provo River; south along the Provo River to SR-35; west on SR-35 to Francis and SR-32; west on SR-32 to US-40 near Jordanelle; north on US-40 to I-80; north on I-80 to SR-32 and Wanship.

Management Unit Description

The Kamas herd unit is located between the Uinta and Wasatch Mountains in the north-central part of the state. The 1977 inventory of the Kamas unit, known as Herd Unit 20 at that time, included a total of 377,532 acres (Giunta 1979). Only about 10% of the range at that time was classified as winter range. Boundary changes in 1985 reduced the total acreage and shifted a portion of the winter range north of the Weber River into the Chalk Creek management unit. There was another realignment of the herd unit boundaries again in 1996, reducing the total acreage by approximately 25%. Even with these changes, the ratio of winter to summer range has stayed basically the same, with about 10% of the area being classified as winter range. The obvious limiting factor for big game in this management unit is the lack of adequate quantities of good quality winter range. With severe winters, the available range is reduced even further. A fairly current example of this problem can be illustrated by the large winter deer losses which occurred during the winter of 1992-93.

As with the Chalk Creek management unit, there is a prevalence of privately-owned land in the Kamas management unit, especially in the most critical low elevation wintering areas. For deer, over 67% of the winter range is under private ownership. The Forest Service manages another 28% of the normal winter range. There is abundant summer range in the Uinta Mountains to the east. These mountains contain the headwaters of the Weber and Provo Rivers, which flow west through the Rhodes and Heber Valleys. The south and west exposures along these rivers, in addition to land along Beaver Creek and the mountain face east and north of Kamas, provide the major deer wintering areas.

Because of the varying topography, the deer winter range is separated into several distinct areas. The upper limits vary considerably, but lower limits generally follow the canyon bottoms, roads, and the upper limits of cultivated land. Wintering areas north of the Weber River, on the Kamas face, Beaver Creek, and the Provo River, have long been recognized as critical to the deer herd on the western edge of the Uinta Mountains. However, there has been a controversy regarding which deer use the Weber River winter range. Data on migration patterns led to the boundary change which shifted this important winter range into the Chalk Creek unit. An area south of Wanship that was surveyed as winter range in 1977 was not considered winter range on the 1984 herd unit map, but the area was sampled with study 7-1 in the past. For a complete and detailed description of all the winter range areas and vegetation types sampled, consult the 1977 Range Inventory (Giunta 1979). The report includes an acreage breakdown by vegetation type and geographic area.

Fourteen different vegetation types were classified, but only nine of the more important types were sampled in the 1977 inventory. Of those, two emerge as the dominant and most valuable types. Together, the oakbrush and sagebrush-grass types occupied more than 70% of the normal winter range. The oakbrush type, dominated by Gambel oak with big sagebrush, serviceberry, and snowberry as the subdominant associates, is often found at the more mesic, higher elevations. The oakbrush range condition, in 1977, was considered generally satisfactory and exhibited light to moderate deer use. Sagebrush-grass, the second most abundant type, often occurs interspersed with the oak type. It normally occupies the lower, especially critical portions

of the winter range. Much of the lower areas have been converted to cropland or are heavily grazed by livestock. Other important types include the rather depleted sagebrush type and a significant mountain brush stand on the south-facing slope of Pinyon Canyon.

Big Game Management Objectives

Current management objectives for deer are to keep the herd in balance with the available range, which includes a yearly harvest of 1,300 bucks with normal conditions. The number of antlerless deer permits would depend on targeted population goals (9,000 wintering deer, modeled number) and condition and trend of the winter range. Management objectives for elk are to achieve a target population size of 650 wintering elk under normal conditions (modeled number), with a bull to cow ratio of 8:100, and with at least 4 of these bulls being 2½ years of age or older. To maintain these target populations, antlerless and either sex permits and a variety of harvest methods and seasons will be used (1998 Utah Big Game Management Plan).

The lack of winter range is the major limiting factor for the deer herd in this unit. A major concern is the continuing loss of habitat to housing and agriculture centered on private lands. Other management concerns for both deer and elk include increases in road building and the resultant highway mortality, minimizing crop depredation by wildlife on private lands, and predation. The construction of Jordanelle Reservoir has inundated several thousand acres of wildlife habitat as well, some of which was important deer winter range. Overuse by both livestock and big game has led to a deteriorating range condition in many critical locations.

The key solution to the deer problems on the herd unit is the protection of the remaining critical winter range. Land purchase in this unit is a high priority of the Division's land acquisition program. The Division has made purchases of critical land east of Kamas in which improvements should be made to enhance the quality of the range. It will be necessary to work with private landowners to discourage overgrazing, and insure hunter access and adequate depredation protection.

Range Trend Studies

There are nine trend studies in management unit 7. Seven of these were established in 1984, and two others were established in 1996. Trend studies in this management unit were reread in 1990, 1996, and 2001. One study, Stevens Hollow (7-1), was discontinued in 2001 by request of the Division biologist who manages the unit. The area surrounding the Stevens Hollow study is undergoing extensive development.

SUMMARY

HERD UNIT 7 - KAMAS

Nine trend studies occur in Wildlife Management 7. These studies were established in 1984 and reread in 1990, 1996 and 2001. In 1996, the Kamas Water Tanks trend study was moved and renamed Elder Hollow (7-10). In 2001, Stevens Hollow (7-1) was discontinued and the trend study, Above Woodland (7-9), was moved to a nearby more suitable location. Due to the change, the Above Woodland trend study is treated like a new site with only baseline data available. All trend studies sample big game winter ranges, however 5 trend studies are above 7,000 feet making them available only during normal winters.

Averages soil trends for the 7 trend studies read in 2001 is 2.4 or slightly down. Three trend studies displayed stable soil trends but Pinyon Canyon (7-2), Above Samak (7-4), Provo River Canyon (7-7), and Elder Hollow had slightly down soil trends. The main factor in these declining trends was an increase in percent cover of bare ground and a general decline in litter cover. Percent cover of bare ground declined an average of 56% between 1996 and 2001 (10% to 22%). Average litter cover declined from 47% in 1996 to 39% in 2001. Herbaceous cover also declined on some sites. The main cause of these trends is drought. Precipitation data from Kamas indicate below normal annual precipitation in 1999, 2000, and 2001. Spring precipitation (April-June) has been especially poor for the past 2 years. Spring precipitation is critical for herbaceous plants and shrub recruitment. In 2000, spring precipitation, April through June, was only 55% of normal. April and June precipitation was exceptionally poor at only 44% and 17% of normal respectively. In 2001, spring precipitation was 79% of normal but May and June were very dry. April precipitation was above normal but May precipitation was only 28% of normal and June 19% of normal (Utah climate summaries 2001).

Trend studies were originally established in 1984 during the middle of an extended wetter than normal period. Conditions were dry during the 1990 reading and wet for the 1996 reading of these trend studies. Annual precipitation was above normal from 1982 to 1986. Drier than normal to normal conditions prevailed from 1987 to 1992. Precipitation in 1995, 1996, and 1998 were above normal.

Average browse trends are 2.9 or nearly stable. All sites had a stable browse trend except for Provo River Canyon which had a slightly down browse trend. This site has a very dense sagebrush population which is showing the effects of drought conditions combined with intense interspecific competition. The average herbaceous trend is 3.7 or slightly up. Many sites showed an increase in perennial grass and forb sum of nested frequency.

A summary table of trends follows.

TREND SUMMARY

Location	Category	1984	1990	1996	2001
7-1 Steven's Hollow	soil	est	3	4	susp
	browse	est	1	1	susp
	herbaceous understory	est	3	3	susp
7-2 Pinyon Canyon	soil	est	3	4	2
	browse	est	2	4	3
	herbaceous understory	est	4	4	3
7-3 Foothill Drive	soil	est	3	4	3
	browse	est	5	3	3
	herbaceous understory	est	3	3	3
7-4 Above Samak	soil	est	3	4	2
	browse	est	2	3	3
	herbaceous understory	est	3	4	3
7-6 Cedar Hollow	soil	est	3	3	3
	browse	est	3	3	3
	herbaceous understory	est	3	3	4
7-7 Provo River Canyon	soil	est	3	3	2
	browse	est	2	4	2
	herbaceous understory	est	3	2	5
7-8 Hailstone	soil	est	3	3	3
	browse	est	3	3	3
	herbaceous understory	est	3	4	5
7-9 Above Woodland	soil				est
	browse				est
	herbaceous understory				est
7-10 Elder Hollow	soil			est	2
	browse			est	3
	herbaceous understory			est	3

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established, susp = suspended, NR = not read